

CELOTEX

REG. U. S. PAT. OFF.

Acoustical Materials



ACOUSTI-CELOTEX

Reg. U. S. Pat. Off.

Trade Mark

Sound Conditioning

PRODUCTS FOR EVERY
SOUND CONDITIONING PROBLEM

THE CELOTEX
CORPORATION
Chicago 3, Illinois

ACOUSTI-CELOTEX CANE FIBRE TILE

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Acousti-Celotex ("C" series) is a rigid, lightweight tile made from *bagasse*, the tough fibre of sugar cane. Bagasse fibres are unusually long, strong, and resilient and are highly resistant to deterioration. Their unique serrations cause the fibres to cling tightly together, producing an exceptionally strong tile. In the completed tile, there are countless minute interstices between the fibres; these tiny voids, exposed by perforations, give cane fibre tile its high sound-absorbing quality.

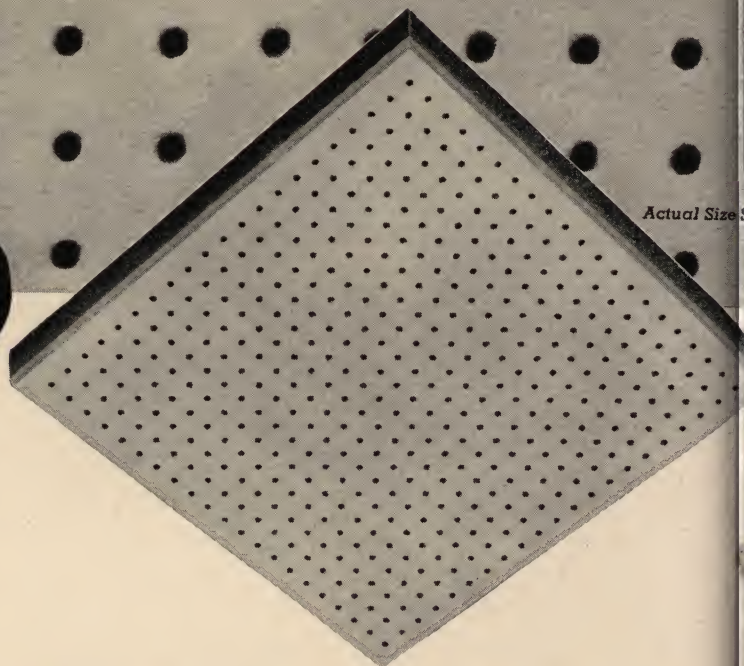
● **SOUND ABSORPTION**—Amount of sound-absorption varies according to (1) thickness of the tile, (2) method of application, and (3) frequency or pitch of sound. Acousti-Celotex Cane Fibre Tile provides Noise Reduction Coefficients of .50 to .75. (See table on page 7.)

● **THERMAL CONDUCTIVITY**—The thermal conductivity of C-Series Acousti-Celotex tile is 0.33 Btu per hour, per square foot, per degree F., per inch thickness.

● **MOISTURE RESISTANCE**—During the manufacturing process the cane fibres are integrally coated by a chemical treatment which makes them highly moisture-resistant. Only in rooms where conditions of excessive humidity prevail is C-Series Acousti-Celotex not recommended.

● **FEROX* PROCESS**—Acousti-Celotex cane fibre tile is effectively protected against termites and dry rot fungi by the exclusive Ferox (patented) process, whereby the individual fibres, before formation into tile, are coated with a chemical complex which is toxic to fungi, termites, and other cellulose destroying organisms. The Ferox treatment presents no hazard to humans or domestic animals, is non-volatile, odorless, permanent, and in no way alters the physical properties of the product.

● **RODENT AND VERMIN RESISTANCE**—Containing no food for rats, mice or other rodents and vermin, C-Series Acousti-Celotex is never attacked by these pests for itself alone. They may gnaw through it where it is a barrier between them and food or water, just as they go through plaster or wood in similar circumstances.



● **PAINTABILITY**—Acousti-Celotex Cane Fibre Tile may be painted repeatedly without impairing its sound-absorption efficiency. The size and spacing of the perforations is such that brushing with paints of usual consistencies does not clog the perforations.

● **RESISTANCE TO IMPACT AND ABRASIONS**—Because of its toughness and resiliency, C-Series Acousti-Celotex is not easily damaged in service. In gymnasiums, where subjected to the impact of indoor baseballs, basketballs, etc., the tile should be placed directly against a solid backing such as wood or plaster board.

● **SIZES AND EDGES**—Standard sizes: 12" x 12" and 12" x 24". Thicknesses: ½", ¾", 1¼". Beveled edges, butt joint. Type C-8, 1" thick, is 24" x 24", 24" x 48" with beveled edge, tongue and grooved on all four sides. Type C-7, 1" thick, 12" x 24", kerfed for erection on Celotex metal suspension system.

FINISHES

NO. 5 FINISH—A two-coat off-white finish rolled on the surface of the tile during manufacture. A smooth finish suitable for subsequent painting when desired. Light reflection factor, .78.

NO. 2 FINISH—A deluxe oil base flat-white paint coating applied at the factory on a pre-finish base. Slightly textured, providing pleasing appearance and high light reflection factor of .81.

SB FINISH—Factory-applied flame-retardant coating. May be repainted with oil base paint without destroying its flame-retardant qualities. Acousti-Celotex Cane Fibre Tile with SB Finish is rated Slow-Burning.

*Reg. U. S. Pat. Off.

ACOUSTI-CELOTEX MINERAL TILE
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Acousti-Celotex Mineral Tile ("M" series) is a highly sound-absorbent tile made of mineral fibres (rock wool) in combination with special binders.

TWO TYPES

PERFORATED MINERAL TILE—Illustrated upper left.

FISSURED MINERAL TILE—Illustrated lower left. Has decorative random fissured surface simulating a travertine texture. Fissures vary in location, size, and depth within each tile.

SOUND ABSORPTION—Depending on type, thickness, and application, Acousti-Celotex Perforated Mineral Tile provides Noise Reduction Coefficients of .65 to .75 (see table on page 7). For sound absorption data on Fissured Mineral Tile, write The Celotex Corporation.

THERMAL CONDUCTIVITY—The thermal conductivity of M-Series Acousti-Celotex is 0.35 Btu per hour, per square foot, per degree F., per inch thickness.

MOISTURE RESISTANCE—During manufacture, the individual fibres are waterproofed by means of a chemical treatment. The finished tile is sufficiently moisture-resistant, with a safe margin, for use under all normal humidity conditions. It is not recommended for use in rooms having abnormally high humidities.

FIRE RESISTANCE—Rated as incombustible.

RODENT AND VERMIN RESISTANCE—Made of mineral fibres, M-Series Tile will not attract rats, mice, other rodents, or vermin.

PAINTABILITY—M-Series Acousti-Celotex may be repeatedly painted with any standard paint without impairing its sound-absorbing efficiency.

RESISTANCE TO IMPACT AND ABRASION—M-Series Acousti-Celotex is not recommended for traffic bearing surfaces as on lower wall areas, or where subjected to impact or abrasion.

SIZES AND EDGES—Standard sizes: 12" x 12". Thicknesses: Perforated Tile, $\frac{5}{8}$ " and 1". Fissured Tile, $\frac{3}{4}$ ". Beveled edges, butt joint.

FINISHES—Acousti-Celotex Mineral Fibre Tile is furnished with a factory applied coat of white paint. It may be repainted with either water or oil base paint, or enamel. Light reflection factor, .80.

Actual Size Section

Acousti-Celotex Fissured Mineral Tile

Actual Size Section



Actual Size Section

CELOTEX MUFFLETONE

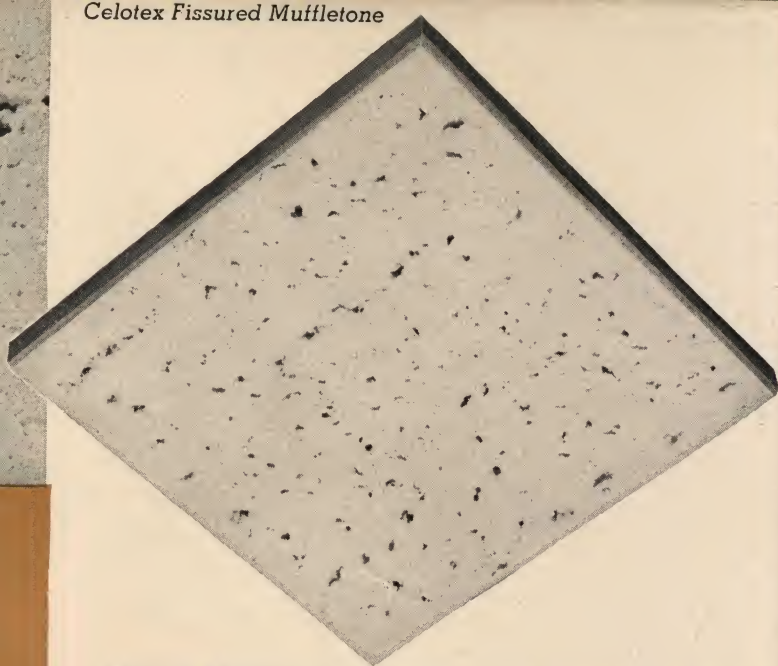
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Actual Size Section



Celotex Standard Muffletone

Celotex Fissured Muffletone



Celotex Muffletone is a porous cast gypsum tile with a decorative textured surface. It is a rigid, highly sound-absorbent tile. A corrugated backing prevents breathing and provides an excellent bond for adhesives. Celotex Muffletone is adaptable for use in churches, public buildings, and wherever a textured surface is desired to harmonize with special architectural effects.

TWO TYPES

FISSURED—Has random irregular fissures which vary in size and location in each tile.

STANDARD—A fine-textured, non-fissured surface.

SOUND ABSORPTION—Noise reduction coefficient: Fissured, .70; Standard, .65. (See table on page 7.)

FIRE RESISTANCE—Incombustible.

SIZE—12" x 12" x 1" thick. Beveled edges, butt joint.

FINISHES—White or integrally colored ivory.

CELOTEX Q-T DUCTLINER

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Celotex Q-T Ductliner is an acoustical material designed especially for use in absorbing sounds usually transmitted through ventilating and air-conditioning ducts. Composed of rock wool and a special binder, it is made in rigid block form. Will not support combustion. Weight is approximately 1½ lbs. per sq. ft. per 1 in. thickness.

THERMAL CONDUCTIVITY—0.30.

SIZE—24" x 36" in ½" and 1" thicknesses.



CELOTEX ACOUSTEEL

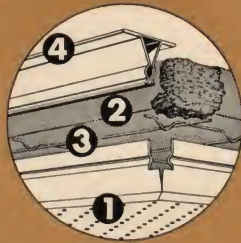
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Actual Size Section



Detail shows:

1. Steel facing.
2. Rock wool pad in flame-proof wrapping.
3. Wire grid.
4. Steel T-bar support.



Celotex Acousteel tile units are composed of (1) a perforated 26-gauge steel facing, (2) a pad of sound-absorbing rock wool wrapped in flame-proof paper, (3) a wire grid which provides an air space between facing and pad, and (4) steel T-bar sections which support the assembly. The T-bar provides for mechanical application, holds the unit firmly in place, and permits easy removal and replacement of individual tiles.

SOUND ABSORPTION—Noise Reduction Coefficient, .85.

FIRE RESISTANCE—Incombustible.

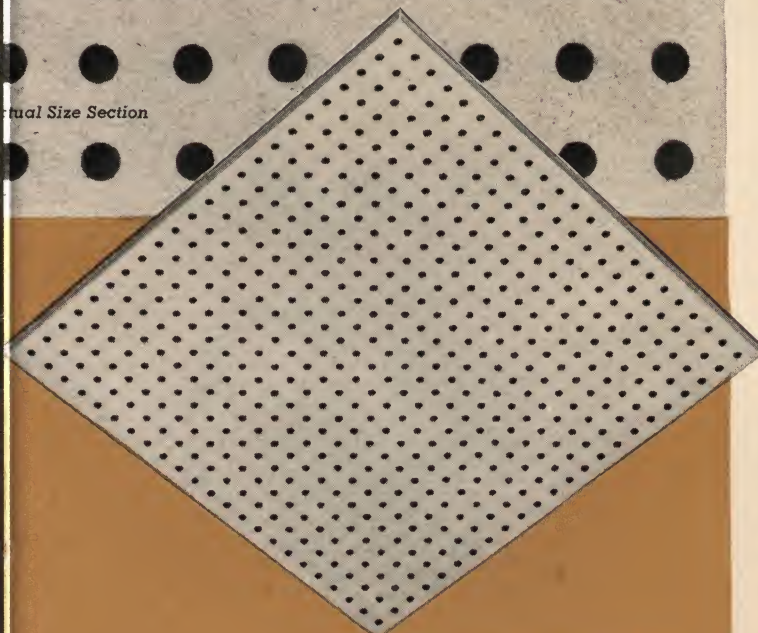
SIZE—12" x 24" with center scoring to represent 12" x 12" tile. Thickness of assembly, 1 5/8". Beveled edges.

FINISH—Two coats baked-on white enamel. Washable and paintable. Light reflection factor, .76.

ACOUSTEEL also available in unperforated units for border or other decorative use.

**CELOTEX PERFORATED PANEL BOARD AND
CELOTEX PERFORATED ASBESTOS BOARD**

Actual Size Section



These are sound-transparent facing materials for use in combination with rock wool or other sound-absorbing units where special construction and/or special sound absorption coefficients are required.

PERFORATED PANEL BOARD is a hardboard (wood fibre) product with smooth natural brown finish. **Size:** 12" x 12", 12" x 24", 24" x 24" and 24" x 48". **Thickness:** 1/8". Beveled edges.

PERFORATED ASBESTOS BOARD is a fireproof material made from Portland cement and asbestos fibres. It has a smooth, hard finish, light gray in color. **Size:** 12" x 12", 12" x 24", 24" x 24" and 24" x 48". **Thickness:** 3/16". Edges beveled or cut square. Also obtainable with a trimmed edge for over-all hole pattern.

Celotex Perforated Asbestos Board

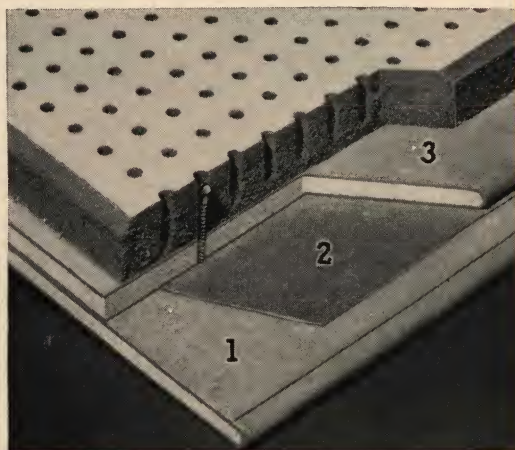
CELOTEX ACOUSTI* LOCK BOARD*

FOR SUSPENDED CEILINGS

Acousti Lock Board is a special screw holding gypsum board assembly. Its screw holding power is provided by means of an extra membrane selected for that purpose, laminated into the assembly. It is 9/16" thick, 96" long by 24" wide and the long edges are ship-lapped. End joints are closed with tightly fitting H-runner clips, or taped, making tight joints over the entire ceiling.

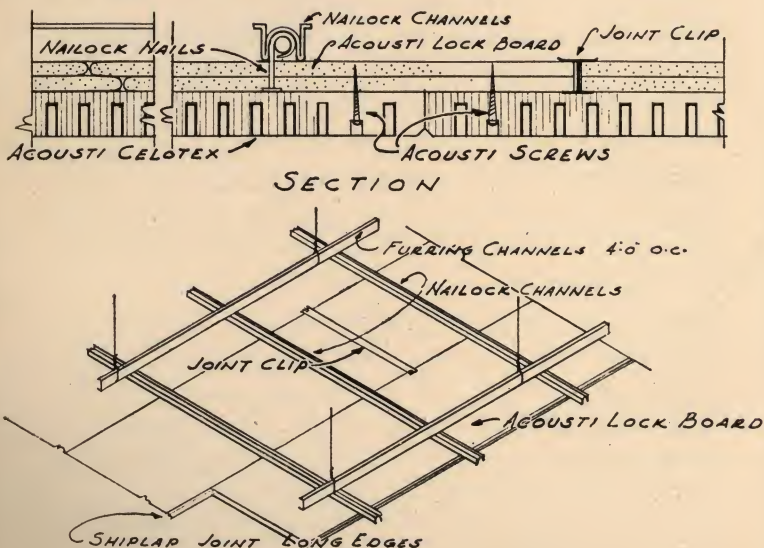
Acousti Lock Board is fire resistant and vermin-proof. Its use permits dry construction with little muss, and the premises can be occupied the moment the work is finished. It makes a substantial, non-breathing ceiling backing and gives a smooth and even surface to which Acousti-Celotex may be attached with screws.

*Trade Marks



Above: Cut-away section showing Acousti-Celotex screwed to Acousti Lock Board. Note screw holding membrane (2) between layers of board (1 and 3)—and the ship-lapped edges.

Left: The jig, used for driving screws, fits snugly over screw hole and is held firmly in place by guides. Screws are driven quickly and cleanly, without marking tile.



HOW TO USE APPLICATION SELECTOR →

The Application Selector and accompanying construction drawings at right present a ready means of choosing the proper material to fit job conditions.

For general sound conditioning where noise reduction is the primary object, the noise reduction coefficient (NRC) in the left hand column is used. This coefficient is the average, to the nearest 5% (established by the Acoustical Materials Association) of coefficients at 256, 512, 1024 and 2048 cycles.

For acoustical correction of auditoriums, churches, lecture halls, etc., where good hearing conditions for speech and music are the primary object, the coefficient of 512 cycles is used.

When the required coefficient has been determined, locate that coefficient in the appropriate column. Reading straight across, all characteristics of the material are given.

The last column indicates construction methods possible with this material to obtain the absorption indicated in the coefficient columns. Complete specifications for these methods may be obtained from your Acousti-Celotex Distributor.

CONSTRUCTION DETAILS

Celotex Acoustical Products are installed by any one of three methods: (1) adhesives, (2) screws or nails, (3) mechanical suspension. Following are POINTS TO NOTE:

Adhesives

Old plaster should be cleaned to eliminate loose or peeling paint, calcimine or cold water paint, grease, etc.

In new construction a sound, level brown coat of plaster provides an acceptable backing.

In the case of Acousti-Celotex Cane and Mineral Tile, supplementary nailing may be used if desired. The Celotex Acoustical Distributor will advise whether this is necessary. He uses only adhesives of proper consistency and proved performance.

Screws or Nails

Acousti-Celotex Cane Tile may be screwed or nailed to wood decks or furring, the screw or nail being countersunk in special perforations provided for that purpose. A special electrically driven screw jig is used for speedy, economical application.

Where application is on furring, a layer of building paper or felt between the tile and the furring will prevent breathing at the joints. This is standard practice with Celotex Acoustical Distributors.

Acousti-Celotex Cane Tile may also be screwed to a rigid insulating board or plywood backing.

Mechanical Suspension

The Celotex Metal Suspension System provides a method for complete ceiling construction. Tile are kerfed to fit onto the supporting metal cross members. Minimum tile thickness 1".

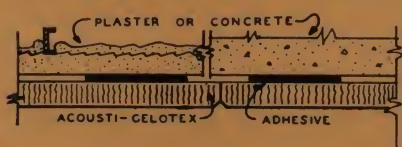
Acousteel (perforated metal tile with sound absorbing rock-wool pads) is installed as a suspended ceiling against 1½" furring channels 4'0" o.c. These tile are removable as desired, providing accessibility to any utilities concealed by the ceiling.

APPLICATION SELECTOR

NRC	SOUND ABSORPTION COEFFICIENTS						PRODUCT	TYPE	THICK.	ADAPTABLE DETAIL (See drawings below)
	128	256	512	1024	2048	4096				
.55	.09	.15	.61	.77	.70	.64	Acousti-Celotex Cane Fibre Tile	CS-1	½"	A, B, C
.55	.10	.24	.63	.61	.63	.63	Acousti-Celotex Cane Fibre Tile	C-1	½"	A, B, C
.65	.11	.23	.80	.93	.58	.50	Acousti-Celotex Cane Fibre Tile	C-9	¾"	A, B, C
.70	.14	.42	.99	.74	.60	.50	Acousti-Celotex Cane Fibre Tile	C-4	1¼"	A, B, C
.70	.15	.34	.99	.94	.61	.61	Acousti-Celotex Cane Fibre Tile	C-6 ¼" Holes	1¼"	A, B, C
.65	.07	.21	.64	.86	.93	.83	Acousti-Celotex Perf. Mineral Tile	M-1	⅝"	A, C
.75	.08	.27	.92	.95	.80	.71	Acousti-Celotex Perf. Mineral Tile	M-2	1"	A, C
.65	.12	.30	.74	.76	.71	.67	Muffletone Cast Gypsum Tile	Standard	1"	A
.70	.09	.29	.83	.97	.77	.71	Muffletone Cast Gypsum Tile	Fissured	1"	A
.60	.14	.46	.52	.71	.72	.64	Acousti-Celotex Cane Fibre Tile	CS-1	½"	D
.70	.12	.45	.79	.89	.61	.60	Acousti-Celotex Cane Fibre Tile	C-9	¾"	D
.75	.25	.58	.99	.75	.58	.50	Acousti-Celotex Cane Fibre Tile	C-4	1¼"	D
.75	.27	.57	.91	.91	.67	.58	Acousti-Celotex Cane Fibre Tile	C-6 ¼" Holes	1¼"	D
.70	.53	.58	.93	.70	.55	.48	Acousti-Celotex Cane Fibre Tile	C-4	1¼"	F (12" x 24" only)
.70	.41	.48	.68	.79	.75	.55	Acousti-Celotex Cane Fibre Tile	C-7	1"	F (12" x 24" only)
.65	.25	.49	.69	.78	.61	.48	Acousti-Celotex Cane Fibre Tile	C-8	1"	D (24" x 24" and 24" x 48")
.75	.40	.44	.79	.99	.77	.71	Acousti-Celotex Perf. Mineral Tile	M-2	1"	F (12" x 24" only)
.65	.25	.66	.71	.71	.55	.49	Acousteel		1⅝"	E (50-50 Perf. and Unperf.)
.85	.25	.52	.99	.99	.81	.60	Acousteel		1⅝"	E (All Perf.)

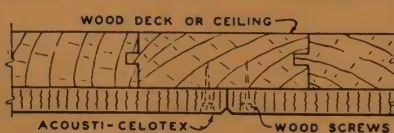
Coefficients listed are AMA Data. Consult The Celotex Corporation for latest data.

DETAIL **A** A M A MOUNTING NO. 1



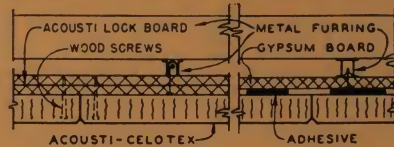
Acousti-Celotex or Muffletone tile cemented direct to concrete slab or plaster surface.

DETAIL **B** A M A MOUNTING NO. 1



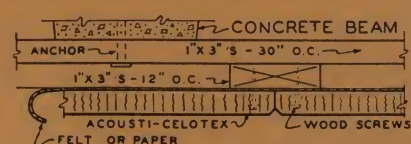
Application of Acousti-Celotex tile to timber or plank construction using wood screws.

DETAIL **C** A M A MOUNTING NO. 1



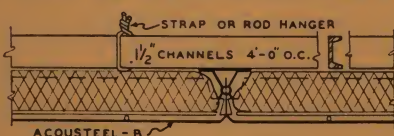
Acousti-Celotex cemented to a suspended gypsum board backing or screwed to suspended Acousti Lock Board.

DETAIL **D** A M A MOUNTING NO. 2



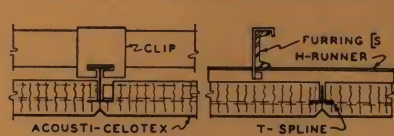
Application of Acousti-Celotex Cane Tile to wood furring. Use of wood screws provides improved anchorage.

DETAIL **E** A M A MOUNTING NO. 3



Acousteel installed as a suspended ceiling. The T-bars may be applied to other suitable surfaces.

DETAIL **F** A M A MOUNTING NO. 7



The Acousti-Celotex Metal Suspension System as a means of establishing the entire ceiling construction.

NOTE: Since an efficient acoustical absorbent may also be an efficient thermal insulator, care should be exercised to prevent condensation on the underside of roof decks or slabs. A complete thermal analysis is suggested.

ACOUSTI-CELOTEX DISTRIBUTORS

ALABAMA

Birmingham 3.....Acousti Engineering Co.
New Orleans 12, La...Acoustics & Specialties Co.

ARIZONA

Phoenix, Tucson. J. B. Matz Specialty Contr., Inc.

ARKANSAS

Little Rock.....Acoustics & Specialties Co.
Memphis 3, Tenn...Acoustics & Specialties, Inc.

CALIFORNIA

Los Angeles 38...The Harold E. Shugart Co., Inc.
Oakland 12, Sacramento, Fresno, San Jose
San Francisco 3.....Western Asbestos Co.

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Hartford 6.....C. A. Bader Co.

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Philadelphia 4, Pa.....Jacobson & Co., Inc.

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Tampa.....Acousti Engineering Co. of Fla.
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GEORGIA

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IDAHO

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ILLINOIS

Chicago 6, Davenport, Iowa...James L. Lyon Co.
Decatur.....Hugh J. Baker & Co.
St. Louis 3, Mo.....Henges Co., Inc.

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Indianapolis 6.....Hugh J. Baker & Co.
Chicago 6, Ill.....James L. Lyon Co.
Louisville 2, Ky.....E. C. Decker & Co., Inc.

IOWA

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Davenport.....James L. Lyon Co.
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Shreveport.....Acoustics & Specialties Co.

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MASSACHUSETTS

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Grand Rapids 9.....Leggette-Michaels Co.

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Minneapolis 15.....Insulation Sales Co., Inc.

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New Orleans 12, La...Acoustics & Specialties Co.

MISSOURI

Kansas City 8, St. Louis 3....Henges Co., Inc.

MONTANA

Butte, Spokane 12, Wash...Asbestos Supply Co.

NEBRASKA

Omaha.....Earl S. Lewis & Co., Inc.
Denver 1, Colo...Lauren Burt, Inc. of Colorado

NEVADA

Sacramento 14, Calif....Western Asbestos Co.
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Philadelphia 4, Pa.....Jacobson & Co., Inc.

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Jamestown.....Collum Acoustical Co., Inc.
New York 17.....Jacobson & Co., Inc.

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Charlotte.....Acousti Engineering Co.
of the Carolinas, Inc.

NORTH DAKOTA

Minneapolis 15, Minn...Insulation Sales Co., Inc.

OHIO

Cincinnati 2, Dayton 2...E. C. Decker & Co., Inc.
Cleveland 14, Columbus 12, Toledo 6, Akron 11,
Pittsburgh 12, Pa...The Geo. P. Little Co., Inc.

OKLAHOMA

Oklahoma City 5, Tulsa
Oklahoma Acoustical & Specialties Co., Inc.

OREGON

Portland 4.....Asbestos Supply Co.

PENNSYLVANIA

Philadelphia 4, Harrisburg. Jacobson & Co., Inc.
Pittsburgh 12.....The Geo. P. Little Co., Inc.
Buffalo 2, N. Y.....Collum Acoustical Co., Inc.

RHODE ISLAND

Providence.....Pitcher & Co., Inc.

SOUTH CAROLINA

Charlotte, N. C.....Acousti Engineering Co.
of the Carolinas, Inc.

SOUTH DAKOTA

Minneapolis 15, Minn...Insulation Sales Co., Inc.

TENNESSEE

Memphis 3.....Acoustics & Specialties, Inc.
Nashville 3, Knoxville,
Chattanooga.....Len Herndon Co., Inc.

TEXAS

Dallas 1, Houston,
Weslaco.....S. W. Nichols Co., Inc.
El Paso.....The Jay Grear Corp.

UTAH

Salt Lake City 4.....Lauren Burt, Inc.

VERMONT

Hartford 6, Conn.....C. A. Bader Co.

VIRGINIA

Richmond 22, Roanoke 2,
Norfolk.....The Hampshire Corp.

WASHINGTON

Seattle 4, Spokane 12,
Tacoma 2.....Asbestos Supply Co.

WEST VIRGINIA

Huntington.....E. C. Decker & Co., Inc.
Pittsburgh 12, Pa...The Geo. P. Little Co., Inc.
Baltimore 11,
Bladensburg, Md....The Hampshire Corp.

WISCONSIN

Milwaukee 2, Green Bay,
Madison.....Edward T. VerHalen, Inc.
Minneapolis 15, Minn...Insulation Sales Co., Inc.

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Salt Lake City 4, Utah.....Lauren Burt, Inc.

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Winnipeg, Calgary, Vancouver, New
Brunswick, Regina,
Windsor...Dominion Sound Equipments Ltd.

ACOUSTI-CELOTEX SOUND CONDITIONING SERVICE

Useful knowledge in science grows with practical experience. Such experience in the field of architectural acoustics consists in the number and variety of problems dealt with. To develop this experience rapidly, The Celotex Corporation in 1925 chose to seek out, school, and establish in all principal market centers an authorized engineering, sales, and contract service by independent, locally owned and operated enterprises.

The combination of this merchandising policy with Celotex Acoustical Products rapidly won and has steadily maintained a position of leadership in this industry.

This policy, controlled through territory franchises, has been the

means of providing architect and owner dependable engineering and application service. With profits coming only from material sales, The Celotex Corporation has the same interest as architect and owner in seeing fair job prices established and maintained.

The Celotex Corporation is proud of the service ideals which its acoustical distributor organization, no less than its own personnel, have woven into the fabric of this business. Ability in diagnosing acoustical problems, honesty in surveys and recommendations, considerateness as well as promptness in contract application work, and timeless interest in the satisfactory performance of every job—these are what we mean by service ideals. They constitute plus values in every specification for a Celotex Acoustical Product.

THE CELOTEX
CORPORATION

120 South LaSalle Street,
Chicago 3,
Illinois

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